

**REMARKS**

On behalf of Applicants, the undersigned attorney expresses appreciation for courtesies extended during the telephone interview conducted with the Examiner and her Primary Examiner on November 19, 2007. Applicants would particularly express appreciation for reevaluation of the restriction requirement with respect to claims 17 and 18.

Claims 1-16 stand rejected. This amendment is intended to respond fully to the Office Action and to place the claims in condition for allowance.

**Claim Rejections – 35 U.S.C. § 112**

Claims 10-15 stand rejected as allegedly indefinite under Section 112. The office action states that they are allegedly indefinite because the phrases “composite implied volatility,” “modified composite volatility,” “in-the-money pain strike price” and “out-of-the-money pain strike price” are not defined in the specification and are discussed in the specification using the term “may.”

Applicant respectfully contends that the phrases “composite implied volatility,” “modified composite volatility,” “in-the-money pain strike price” and “out-of-the-money pain strike price” are defined in the specification, *see, e.g.* paragraphs 0161 and 0163, and, additionally, that their meanings are well known to a person of ordinary skill in the art. Moreover, the office action cites *In re Johnston*, 435 F.3d 1381 (Fed. Cir. 2006) for the proposition that “optional elements do not narrow the claim construction because they can always be omitted.” According to the MPEP, the facts of prior legal decision must be *sufficiently similar* to those in an application under examination for the examiner to use the rationale used by the court. *See* MPEP § 2144.04. *In re Johnston* is distinguishable

on its facts, however, because it involved a case where the word “may” appeared in the claims such that the claim limitation was permissive. Here, the phrases “composite implied volatility,” “modified composite volatility,” “in-the-money pain strike price” and “out-of-the-money pain strike price” are not used in the claims in an optional sense. For example, claim 10 states that displaying said trade data further comprises determining and displaying for each one of said plurality of time units a composite implied volatility, not that the displaying *may* further comprise determining and displaying.... As such, the rationale of *In re Johnston* is not applicable. For at least these reasons, Applicants respectfully request reconsideration and allowance of claims 10-15.

#### **Claim Rejections – 35 U.S.C. § 102**

Claims 1, 2, 5-7 and 16 stand rejected under Section 102 as allegedly anticipated by U.S. Patent 5,347,452 to Bay.

Claim 1 requires, *inter alia*, selecting a first time span, wherein the first time span includes a plurality of time units; selecting at least one of the plurality of time units; determining a second time span, wherein the second time span includes at least the selected at least one time unit; and determining prices and volumes for the at least one financial product for the second time span. Applicants respectfully contend that Bay discloses displaying price and volume data for a *preselected* time interval taken over a *predetermined* number of the preselected time intervals and does not disclose selecting time units or time spans. *See* Abstract, ll. 5-9. In addition, Applicants respectfully contend that Bay only displays the predetermined number of time intervals and does not disclose determining a *second* time span, wherein the second time span includes at least the selected at least one time unit, nor does it disclose determining prices and volumes for

the at least one financial product for the second time span. In particular, the Office Action points to col. 3, ll. 9-16. However, the time intervals disclosed in this portion of the specification are neither selected nor determined, but instead are referenced for illustrative purposes. In addition, the alleged second time interval does not include at least a selected at least one time unit. Moreover, this portion of the specification does not disclose determining a *second* time span, wherein the second time span includes at least the selected at least one time unit.

Additionally, claim 1 has been amended to clarify the classifying step by requiring that the prices are classified according to a plurality of price zones by grouping together trade data that have prices within each of the plurality of price zones. Support for the amending language can be found in paragraph 00142 of the specification. Applicants respectfully contend that the cited prior art does not disclose grouping together trade data that have prices within each of the plurality of price zones. For at least these reasons, Applicants respectfully contend that the cited prior art does not disclose all of the elements of amended claim 1 and requests reconsideration and allowance of claim 1 and all claims that depend from claim 1.

Claim 2, which depends from claim 1, is allowable for at least the reasons given with respect to claim 1, and additionally because it requires each of the plurality of price zones be a discrete price. Applicants respectfully contend that Bay does not disclose all of the elements of claim 2. Specifically, column 4, lines 47-51 of Bay disclose using “tic counts,” which are the number of transactions, and do not disclose each of the plurality of price zones being a discrete price. For at least these reasons, Applicants respectfully request reconsideration and allowance of claim 2.

Claim 5, which depends from claim 1, is allowable for at least the reasons given with respect to claim 1, and additionally because it requires selecting at least one price zone from the plurality of price zones, displaying a graph of prices versus time and drawing a price line corresponding to the selected at least one price zone. Applicants respectfully contend that Bay does not disclose selecting at least one price zone from the plurality of price zones and no reference to such a disclosure has been made in the office action. In addition, Applicants respectfully contend that Bay does not disclose drawing a price line corresponding to the selected at least one price zone. The office action cites column 4, lines 25-27 for this disclosure, but that portion of the specification states “As shown in FIGS. 1 and 2, this price information is displayed with volume information for each time interval.” Applicants respectfully contend that neither this portion of the specification nor FIGS. 1 or 2 disclose drawing a price line corresponding to the selected at least one price zone. For at least these reasons, Applicants respectfully request reconsideration and allowance of claim 5.

Claim 6, which depends from claim 1, is allowable for at least the reasons given with respect to amended claim 1, and additionally because it requires determining and displaying for each one of the plurality of price zones a corresponding volume over the second time span. Applicants respectfully contend that the cited prior art does not disclose all of the requirements of claim 6 and, therefore, request reconsideration and allowance of claim 6.

Claim 7, which depends from claim 1, is allowable for at least the reasons given with respect to claim 1, and additionally because the step of determining the second time span comprises selecting a count of time units, wherein the second time span includes the

selected at least one of the plurality of time units and the count of time units occurring before the selected at least one of the plurality of time units. Applicants respectfully contend that Bay does not disclose determining a second time span, nor does it disclose selecting a count of time units, wherein the second time span includes the selected at least one of the plurality of time units *and* the count of time units occurring before the selected at least one of the plurality of time units. For at least these reasons, Applicants respectfully request reconsideration and allowance of claim 7.

Independent claim 16 requires, *inter alia*, determining first trade data for the at least one financial product, wherein the first trade data comprises contract prices. The office action cites column 3, lines 13-16, but this portion of the specification discloses displaying “average trade *volume*” (emphasis added) and not determining first trade data comprising contract prices. Claim 16 also requires dividing the first time span into a plurality of time units; selecting a subspan of the first time span; determining a second time span, wherein the second time span includes at least the selected subspan; and determining second trade data for the at least one financial product for the second time span. Applicants respectfully contend that Bay does not disclose determining a second time span, wherein the second time span includes at least the selected subspan of the first time span. In addition, claim 16 has been amended to clarify that classifying prices according to a plurality of price zones is accomplished by grouping together trade data that have prices within each of the plurality of price zones. Support for the amending language can be found in paragraph 00142 of the specification. Applicants respectfully contend that Bay does not disclose grouping together trade data that have prices within

each of the plurality of price zones. For at least these reasons, Applicants respectfully request reconsideration and allowance of claim 16.

**Claim Rejections – 35 U.S.C. § 103**

Claims 3, 4, 10 and 11 stand rejected as allegedly obvious under Section 103 over Bay in view of U.S. Patent Publication 2005/0102214 to Speth, et al. Claim 3, which depends from claim 1, is allowable for at least the reasons given with respect to amended claim 1, and additionally because it requires the financial product be a future contract. Applicants respectfully contend that neither Bay, nor Speth, singly or in combination, disclose all of the claimed elements of claim 3 as it depends from claim 1, and respectfully request reconsideration and allowance of claim 3.

Claim 4, which depends from claim 1, is allowable for at least the reasons given with respect to claim 1, and additionally because it requires the financial product be an option contract. The office action points to paragraph 0067, lines 5-7 of Speth as providing the motivation to combine references. However, this section of Speth states, in relevant part, “The futures contract can track the level of an ‘increased-value index’ (VBI) which is larger than the volatility index” and does not provide a motivation to require the financial product be an option contract. Applicants respectfully contend that neither Bay nor Speth, singly or in combination, disclose all of the elements of claim 4 and request reconsideration and allowance of claim 4.

Claim 10, which depends from claim 1, is allowable for at least the reasons given with respect to claim 1, and additionally because it requires determining and displaying for each one of the plurality of time units a composite implied volatility. Applicants

respectfully contend that neither Bay nor Speth, singly or in combination, disclose all of the elements of claim 10 and request reconsideration and allowance of claim 10.

Claim 11, which depends from claim 1, is allowable for at least the reasons given with respect to claim 1, and additionally because it requires determining and displaying for each one of the plurality of price zones a modified composite implied volatility. Applicants respectfully contend that neither Bay nor Speth discloses determining and displaying for each one of the plurality of *price zones* a modified composite implied volatility. As none of the cited art, singly or in combination, discloses all of the elements of claim 11, Applicants respectfully request reconsideration and allowance of claim 11.

Claims 8 and 9 stand rejected as allegedly obvious under Section 103 over Bay in view of U.S. Patent 6,681,211 to Gatto.

Claim 8, which depends from claim 1, is allowable for at least the reasons given with respect to claim 1, and additionally because it requires displaying for each one of the plurality of time units at least one volume corresponding to at least one of a plurality of trader groups. Applicants respectfully contend that the cited prior art, singly or in combination, does not disclose displaying for each one of the plurality of *time units* at least one *volume* corresponding to a plurality of *trader groups*. The office action cites column 6, lines 33-61 of Gatto for this disclosure, but Applicants respectfully contend that displaying at least one volume is not disclosed in this section, nor is it disclosed in FIG. 12, to which this section of the specification of Gatto refers. For at least these reasons, Applicants respectfully request reconsideration and allowance of claim 8.

Claim 9, which depends from claim 1, is allowable for at least the reasons given with respect to claim 1, and additionally because it requires displaying for each one of the

plurality of price zones at least one volume corresponding to at least one of a plurality of trader groups. Applicants respectfully contend that the cited prior art, singly or in combination, does not disclose displaying for each one of the plurality of *price zones* at least one *volume* corresponding to at least one of a plurality of *trader groups*. The office action cites column 27, lines 11-22 of Gatto for this disclosure, but Applicants respectfully contend that displaying at least one volume is not disclosed in this section, nor is it disclosed in FIG 24, to which this section of the specification of Gatto refers. For at least these reasons, Applicants respectfully request reconsideration and allowance of claim 9.

Claims 12-15 stand rejected as allegedly obvious under Section 103 over Bay in view of U.S. Patent Publication 2004/0133500 to Thompson, et al.

Claim 12, which depends from claim 1, is allowable for at least the reasons given with respect to claim 1, and additionally because it requires determining and displaying for a subset of the plurality of price zones an in-the-money pain strike price, wherein the subset of the plurality of price zones correspond to prices which are in-the-money. The office action states that Bay does not teach this step and cites paragraph 0105, lines 22-25 of Thompson for its inclusion. However, this portion of Thompson refers to Fig. 21, which “is a strategy data screen 2100 for the Long Call strategy” (paragraph 0105, line 3). Applicants respectfully contend that Thompson discloses displaying the intrinsic value for a list of options and, as shown in Fig. 21, does not disclose determining and displaying *for a subset of the plurality of price zones* an in-the-money pain strike price, nor does it disclose the subset of the plurality of price zones corresponding to prices that are in-the-money, as required by claim 12. As the cited prior art, singly or in



combination, does not disclose all of the elements of claim 12, Applicants respectfully request reconsideration and allowance of claim 12.

Claim 13, which depends from claim 1, is allowable for at least the reasons given with respect to claim 1, and additionally because it requires determining and displaying for a subset of the plurality of price zones an out-of-the-money pain strike price, wherein the subset of the plurality of price zones correspond to prices which are out-of-the-money. The office action states that Bay does not teach this step and cites paragraph 0105, lines 25-27 of Thompson for its inclusion. However, this portion of Thompson refers to Fig. 21, which “is a strategy data screen 2100 for the Long Call strategy” (paragraph 0105, line 3). In addition, this portion of Thompson discloses only that “The price of an out-of-the-money option consists entirely of time value.” Applicants respectfully contend that Thompson discloses displaying the intrinsic value for a list of options and, as shown in Fig. 21, does not disclose determining and displaying *for a subset of the plurality of price zones* an out-of-the-money pain strike price, nor does it disclose the subset of the plurality of price zones corresponding to prices that are out-of-the-money, as required by claim 13. As the cited prior art, singly or in combination, does not disclose all of the elements of claim 13, Applicants respectfully request reconsideration and allowance of claim 13.

Claim 14, which depends from claim 1, is allowable for at least the reasons given with respect to claim 1, and additionally because it requires determining and displaying for a subset of the plurality of price zones an in-the-money pain open interest, wherein the subset of the plurality of price zones correspond to prices which are in-the-money. The office action states that Bay does not teach this step and cites paragraph 0105, lines

22-25 of Thompson for its inclusion. However, this portion of Thompson refers to Fig. 21, which “is a strategy data screen 2100 for the Long Call strategy” (paragraph 0105, line 3). In addition, Thompson discusses open interests, but makes no distinction between in-the-money pain open interests or other types of open interests. Applicants respectfully contend that Thompson discloses displaying the intrinsic value for a list of options and, as shown in Fig. 21, does not disclose determining and displaying *for a subset of the plurality of price zones an in-the-money pain open interest*, nor does it disclose the subset of the plurality of price zones corresponding to prices that are in-the-money, as required by claim 14. As the cited prior art, singly or in combination, does not disclose all of the elements of claim 14, Applicants respectfully request reconsideration and allowance of claim 14.

Claim 15, which depends from claim 1, is allowable for at least the reasons given with respect to claim 1, and additionally because it requires determining and displaying for a subset of the plurality of price zones an out-of-the-money pain open interest, wherein the subset of the plurality of price zones correspond to prices which are out-of-the-money. The office action states that Bay does not teach this step and cites paragraph 0105, lines 25-27 of Thompson for its inclusion. However, this portion of Thompson refers to Fig. 21, which “is a strategy data screen 2100 for the Long Call strategy” (paragraph 0105, line 3). In addition, this portion of Thompson discloses only that “The price of an out-of-the-money option consists entirely of time value,” and Thompson discusses open interests, but makes no distinction between out-of-the-money pain open interests or other types of open interests. Applicants respectfully contend that Thompson discloses displaying the intrinsic value for a list of options and, as shown in Fig. 21, does


not disclose determining and displaying *for a subset of the plurality of price zones an out-of-the-money pain open interest*, nor does it disclose the subset of the plurality of price zones corresponding to prices that are out-of-the-money, as required by claim 15. As the cited prior art, singly or in combination, does not disclose all of the elements of claim 15, Applicants respectfully request reconsideration and allowance of claim 15.

For at least these reasons, Applicants respectfully submit that claims 1-18 are patentable over the cited prior art and request allowance of all pending claims.

If the Examiner believes it would help to advance prosecution, the undersigned would welcome the opportunity to discuss the above amendment in an additional telephone interview and can be reached at (312) 201-0011.

Respectfully submitted,

Dated this 18<sup>th</sup> day of December, 2007.

  
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